

Prescription hypnotics in the news: a study of UK audiences

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Abstract

In 2012 the UK media reported the results of a paper in the *British Medical Journal Open*, including the finding that hypnotics increase the risk of 'premature death'. Taking this media coverage as a case study, the paper explores UK people's responses and assesses the implications for the debate about the (de)pharmaceuticalisation of sleep. Two hundred and fifty one posts to the websites of 6 UK newspapers were analysed thematically, along with 12 focus group discussions (n=51) of newspaper coverage from one UK newspaper. Four thematic responses were identified: bad science/journalism, Hobson's choice, risk assessment and challenging pharmaceuticalisation. We found that most people claimed that the story did not worry them, even if they stated that they were using sleeping pills, and that focus group members generally appeared to respond in terms of their pre-existing views of hypnotics. The way in which lay expertise was drawn on in responding to the coverage was one of the most striking findings of the study. People referred to their own or others' experience of taking hypnotics to recognise the legitimacy of taking them or to weigh up the risks and benefits, as reflexive users. Overall, our case study cautions against making strong claims about the power of the media to legitimate de-pharmaceuticalisation. While the media may have such a role, this is in the main only for those who are receptive to such a message already.

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Introduction

Sleep is in the news for all sorts of reasons these days. Scarcely a day goes by without some sleep-related story appearing on life in a ‘chronically sleep deprived society’, from the stresses and strains of living in a wired 24/7 world to excessive daytime sleepiness (Kroll Smith 2003, Seale et al 2007, Williams 2005, Williams et al 2008).

One important strand and long-running saga here concerns media coverage of sleep medicines, particularly prescription hypnotics or sleeping pills, which have tended over time to receive a bad press (Gabe and Bury 1988, 1991, 1996a, 1996b). For example, after a generally enthusiastic welcome in the 1960s, benzodiazepine sleeping pills have been increasingly criticised for causing addiction, dependence and even psychosis, and as examples of a ‘pill-popping way of life’ (Montagne 1991).

In this paper we shed further critical light on these matters, with particular reference to debates on the (de)pharmaceuticalisation of sleep, taking recent media coverage of a *British Medical Journal Open* article on the raised mortality risks of long-term prescription hypnotics as our case study. In contrast to much previous work of this kind, our focus here is on people’s responses to this breaking, newsworthy storyline, through online posts and follow up focus groups. Key questions include the following: how did readers process this story? did they feel more concerned about taking sleeping tablets as a result of this news report, did they

dismiss such a report as an example of media exaggeration, and did they respond according to their pre-existing views about the merits (or otherwise) of taking such medications?

The paper, as such, is dually situated at the nexus of newly emerging and long overdue attention to sleep matters in the social sciences, medically related or otherwise, and other recent debates in sociology and cognate fields regarding the ‘pharmaceuticalization’ of life (Abraham 2010, Williams et al 2011, Bell and Figert 2012), of which sleep of course is a vital part. Our focus in this paper is on the extent to which media coverage of the negative effects of sleeping tablets might contribute to the de-pharmaceuticalisation of sleep. Before we consider our data on this issue we review the literature on the pharmaceuticalisation of sleep and discuss the case study and methods underpinning our study.

The pharmaceuticalisation of sleep

Pharmaceuticalisation has been employed as an explanatory concept in the social sciences for some time, being first used in anthropology by Nichter in 1989 (cited in Bell and Figert 2012) and in sociology by Abraham in 2007 (Abraham 2007, Gabe et al 2015). It refers to a process whereby human conditions, capabilities and capacities are translated into opportunities for pharmaceutical intervention (Williams et al 2011). While overlapping with medicalisation (the use of pharmaceuticals as treatment is a feature of both theories and both recognise that doctors can be gatekeepers for medications) pharmaceuticalisation is distinct in that it encompasses the non-medical use of pills (e.g. for lifestyle, recreation or enhancement purposes) and access to them from outside the medial arena (including over-the-counter purchases to procurement on the Internet and black market). Relations between pharmaceuticalisation and medicalisation are therefore complex and contingent (Williams et al 2011), especially in the case of sleeping pills, which are predominately under medical control as prescription medications.

A key conveyor or amplifier of the process of pharmaceuticalisation, according to Williams et al (2011), is the mass media who may celebrate the introduction of new drugs, publicise particular pharmaceutical regimes and generate various levels of public support for their adoption (Biehl, 2007). For instance, as noted above, the media in the US and UK gave benzodiazepine sleeping pills an enthusiastic welcome as a new drug heralding a new era when they first arrived on the market in the 1960s (Gabe and Bury 1996b). Similarly, others have found media coverage of new (cancer) drugs to be biased in favour of reporting benefits, indeed perhaps even overemphasising or exaggerating these, to the exclusion of non-pharmaceutical therapeutic options (Davis, 2015). However, once potential dangers in the form of side effects or misuse have been detected, media coverage often takes a more critical stance (Williams et al 2011). Sleeping pills, particularly benzodiazepines, have received a ‘bad press’ for many years, being associated with side effects, dependence and addiction. The role of the mass media in conveying processes of de-pharmaceuticalisation through such ‘scare stories’ highlighting dangers and risks associated with pharmaceutical use has not, to our knowledge, been examined empirically to date.

While a major focus has been on the growth in pharmaceuticalisation, particularly in OECD countries, the process should be viewed as bi-directional; in other words it is also possible for de-pharmaceuticalisation to take place (Williams et al 2011). For example, doctors and/or patients/health consumer groups might advocate a drug’s withdrawal and replacement with non-drug therapies, and this critical stance might be legitimated by the mass media, as happened with the benzodiazepines in the 1980s and 90s (Gabe and Bury 1988, 1996b).

While it is more likely in practice for a new generation of drugs to replace a previous generation rather than being phased out as an area of intervention, the latter remains a possibility (Gabe et al 2015). And of course there is evidence of resistance to pharmaceuticals and pharmaceuticalisation amongst lay people (e.g. Pound et al 2005; Murdoch et al 2013),

who may demonstrate a sophisticated 'lay pharmacology' about the safety, efficacy and side effects of prescribed medications (Webster et al 2009).

In the case of sleep there is considerable evidence that Britons are suffering from sleep problems for which a medical solution might be sought. It has recently been reported that up to one third of Britons are suffering from insomnia at any one time, and that at least one in ten can be characterised as a chronic insomniac (MHF 2011). Having sleep problems also seems to be a persistent issue with 74% in a longitudinal study reporting continuing problems one year on and 46% claiming these difficulties three years on. In a UK study of 17,000 respondents, one third reported that they had less than 6.5 hours sleep a night on average and 12% indicated that they regularly had less than 6 hours sleep a night (Understanding Society 2011).

Faced with such sleep problems it is perhaps not surprising that people have turned to doctors for advice and, as a result, have frequently been prescribed a hypnotic. It has been reported that around a tenth of people aged 16 and over take sleeping tablets three or more times a week (9% men and 10% women) and the likelihood of taking such a medication increases with age, although varying by gender (Understanding Society 2011). For example, in the recent *Understanding Society* survey, 25% women and 15% men over 85 years of age reported taking a hypnotic three or more nights a week, although this included both prescription and over-the-counter medications. Interestingly, current rates of hypnotic prescribing in the UK are less than they were 35 years ago (13.6 million prescriptions for hypnotics were issued in 1980, source: Morgan and Clarke, 1997). While there was a marked increase in prevalence between 1993 and 2000, rates remained stable between 2000 and 2007 at around 10 million items prescribed per year (Calem et al 2012), although they have been declining a little more recently (to around 9.5 million items in 2014, HSCIC, 2015).

The market for sleeping tablets in the UK has traditionally been dominated by the benzodiazepines like temazepam and nitrazepam but these have now been replaced as market leaders by the so-called Z drugs like Zopiclone and Zolpidem. In 2014 almost 6.5 million prescriptions for z drugs were dispensed (primarily Zopiclone) and nearly 2 million benzodiazepines were prescribed as sleeping tablets (temazepam being the market leader with 1.7 million prescriptions) (HSCIC 2015). The majority of these sleeping tablets have been prescribed for four weeks or more; that is contrary to guidance from the UK National Institute for Healthcare Excellence (NICE 2004), which has consistently warned about the dangers of dependence on these medications, especially the benzodiazepines. Similar advice about the dependence potential of benzodiazepines, including as sleeping tablets, was issued by the UK Department of Health and Social Security in the 1980s (Gabe and Bury 1988).

Faced with such concerns, attention has been focused recently on non-pharmaceutical treatments and whether they might be as/more successful than medications. There is some evidence that cognitive behavioural therapy (CBT) can be successful (Morin et al, 1999, 2006) though this has still has to be endorsed by NICE, through a national insomnia treatment programme, despite lobbying for such guidance (NICE 2010). CBT is also part of the UK government's programme for Improving Access to Psychological Therapies (IAPT) in England, suggesting that there has been some modest encouragement for de-pharmaceuticalisation. However, as the prescription rates suggest sleeping tablets still seem to be favoured by many patients and their doctors.

This evidence of the use of hypnotics and the possibility of alternative forms of therapy provides the context for our research into the role the mass media play in the de-pharmaceuticalisation of sleep. In our analysis we consider one aspect of this, namely, how people *respond* to media coverage of the reported risks of hypnotics. In what follows we assume that audience readings of such texts and/or reactions to them are made in relation to

their biographies and the constraints of their daily lives; what Bloor (1995) has called the situated rationality approach to risk. Responses are likely to be diverse rather than uniform and may demonstrate resistance as well as alignment with dominant ideas. Certainly there is evidence that users of sleeping tablets often feel ambivalent about taking them, seeing them as representing an unnatural interference with a natural state and associating their use with loss of control and addiction (Cheung et al 2015, Davy et al 2013, Gabe and Lipshitz-Phillips 1984, Gabe and Thorogood 1986, Venn and Arber 2012). Some users may thus respond to media coverage of sleeping tablets as bolstering their resistance to taking these drugs, while other users may reject the alleged risks of taking them and continue to assert that they need them, while non-users may be expected to take a more avowedly critical stance and accept the risks of use as not only too great but as a sign of moral weakness. In this way respondents are likely to draw on particular repertoires to justify and legitimate hypnotic use/non-use in the management of sleep problems such as the ‘deserving user’, the ‘responsible user’, and the ‘addict’ (Gabe et al 2016). By ‘repertoire’ we mean a relatively coherent system of meanings for ‘characterizing and evaluating actions, events and other phenomena’ (Potter and Wetherell 1987: 149).

Whatever their response it is assumed that audiences for such messages should be seen as active rather than passive (Seale 2004). As Webster (2014: 120-1) argues, ‘audiences do not straightforwardly absorb messages. Instead they interpret them, bringing to them values and meanings gleaned elsewhere’. Moreover they interact with these messages, to ‘challenge, expand, reject or embrace’ them. This is certainly likely to be the case where people have the opportunity to react online to what they have been reading on the Internet.

Media Case Study and Methods

We start with a brief account of the story and the media response before discussing the methods we used to explore how the public and focus group members responded to the story. The value of the case study approach is also considered.

Media Case Study

On 28 February 2012 the UK media gave particular coverage to an article in the *British Medical Journal Open* (Kripke et al 2012) about the negative effects of taking prescribed hypnotics. Newspapers, television news programmes and websites all reported the study findings, often using eye catching headlines. This paper considers how coverage of this news story on websites of UK national newspapers and the British Broadcasting Corporation (BBC) resulted in a series of posts over eight days from the story's publication, and subsequently how members of focus groups viewed such reporting. The findings are considered in the context of the debate about the pharmaceuticalisation and de-pharmaceuticalisation of sleep.

The BMJ Open article was based on a large study in the United States which had compared medical records of 10,000 people who had been prescribed sleeping pills over 2.5 years, on average, with 23,000 who reportedly had never received a prescription for such drugs. Those prescribed sleeping pills, even at very low doses, were found to be more likely to die than those who had not been prescribed these pills. Those prescribed high doses (more than 132 pills a year) were also more likely to develop cancer than non-users. Overall, however, the authors of the study admitted they could not tell if the medicines themselves were a *direct* cause of higher rates of death or cancer as it was possible that both the use of sleeping tablets and the risk of death could be associated with lifestyle factors.

UK newspaper coverage included a variety of headlines, ranging from the broadsheets which noted 'Safety concerns over sleeping pills taken by millions' (*Daily Telegraph*) and 'Sleeping pills increase risk of death, study suggests' (*The Guardian*) through to tabloid newspapers that claimed 'Sleeping pill users "up to five times more likely to die early"' (*Daily Mail*) and 'Sleeping pills can be lethal' (*The Sun*). On the BBC News website the headline was 'Sleeping pills "linked to increased death risks"' (BBC News).

The *Daily Mail* article can be taken as an example of this media coverage. It was chosen because it was accessible to all, unlike the broadsheet articles, and had generated the most posts amongst the tabloids. Although not directly advising hypnotic users to stop taking this medication, this article can be seen as promoting a de-pharmaceuticalisation agenda, focusing on the possible risks and negative side effects of hypnotic medication whilst reporting non-pharmaceutical alternatives to insomnia management (such as CBTi) in a more favourable light. Concerned patients are then advised to discuss their medication use with their GP. The article ends with a short statement from a leading British expert in clinical psychopharmacology who is quoted as saying "I agree these drugs do have problems, but I find some of these results difficult to accept. The main one is that with 18 doses a year you have three times the mortality – that's quite incredible, because you would have people dropping like flies".

Faced with these headlines how did audiences of the UK national media respond with online posts (referred to from this point as 'posters') and how did those who were subsequently shown the *Daily Mail* coverage in focus group discussions react? In particular did they respond in such a way as to suggest that this coverage was encouraging a process of de-pharmaceuticalisation?

Methods

Following the reporting of the BMJ Open paper in the online version of the UK media on 28 February 2012, all posters' comments linked to this coverage up to 6 March (eight days in total) were included in the sample, totalling 293 comments. These posts appeared on the websites of 6 newspapers (see table 1).

Table One about here

Comments not directly relevant to the content of the newspaper story (for example spam messages or arguments between posters diverging from the content of the article) were excluded, reducing the sample to 255 posters' comments. Exchanges between posters were included where relevant. The sample incorporates occasional multiple posts from the same user. It is not known exactly how many people responded to these stories as they could have used different user names to post messages. Nor is the background of posters known, unless they revealed such information. It is possible that some of the posters may have resided outside the UK as geographical location was only mentioned by them infrequently. It may also be the case that some posters wrote what they did in order to appear knowledgeable in front of other posters rather than express authentic feelings. The fact that most posters used pseudonyms makes such impression management less likely but does not exclude it completely. Posters are also a self-selected group although we do not see this as a problem given our case study approach (see below). Analysis of the posts was undertaken thematically, systematically identifying different topics in the data, probing the disposition of the poster (whether favourable or hostile to the storyline) (Bryman 2012) and undertaking frequency counts.

In addition, an example of newspaper coverage of the story, from the *Daily Mail* (described above), was discussed in focus groups with people who might be expected to have particular views on sleep and its management. We purposively selected these groups in order to explore

diversity in experiences of and attitudes towards sleeping pills rather than for representativeness. The focus group was chosen as the preferred method as we were interested in how people discussed sleep and sleeping pills collectively and the normative understandings underlying such processes (Bloor et al 2001). A particular advantage of the focus group method is that the participant's point of view is much more likely to be revealed than in a traditional interview, because s/he has more ownership of the research process. On the other hand there are potential problems with 'group effects', especially whether group norms lead to more agreement than one might expect to be the case (Morgan 1997) and the possibility that participants may be prone to expressing culturally expected views (Bryman 2012). In the study reported here the pressure to express expected views about the media story may have been moderated by the scheduling of this topic late in the focus group, when impression management might have been less of an issue.

Following ethics approval from the National Health Service in England, we held 12 focus groups with 51 participants between 2012 and 2014 who discussed the *Daily Mail* article (a further eleven groups did not consider the article). Focus groups ranged from those recruited from primary care who had been long term users of hypnotics (3 focus groups, 12 participants) to residents of a retirement complex (3 focus groups, 15 participants) to parents of young children (one group, 6 participants). Focus groups were also held with medical students (one focus group, n=3), university lecturers (two focus groups, n=8), lawyers (one group, n=3) and those suffering from narcolepsy (one focus group, n=4). The size of the group did not seem to have any bearing on the content of the talk generated.

Research participants were recruited in a number of ways. General practice patients were invited to participate by their GP, on the basis of having received a prescription for sleeping tablets. Those attending the narcolepsy clinic were asked to contact the researchers if they

were interested in being part of the research by the clinician in charge of the clinic. Students were recruited through the local university student union, departmental student lists and personal contacts. Parents of young children were recruited through local parent and toddler groups. The focus groups made up of academics and lawyers were formed through personal contacts. Those who lived in the retirement complex were invited to participate via a gatekeeper who lived on site. All participants were given an information sheet in advance, explaining that their comments would be anonymised and that they could withdraw from the study at any time without giving a reason. Written informed consent was provided by all participants.

The resulting 12 focus groups were reasonably diverse in terms of age, with about 55% of the sample being 45 years of age or over. Around 70% of participants were female and over 90% identified as of white British or Irish ethnicity. Over half the sample (60%) had, or had previously had before retirement, a higher managerial or professional job.

(Table Two about here)

In each of these focus groups we asked participants to discuss how they managed sleep problems in their daily lives, including whether they used hypnotics, as well as their views of the newspaper story. Towards the end of each focus group session we handed out the media story to participants and asked them to look at it and tell us what they thought. Thirty one participants, across the 12 focus groups, disclosed current or previous use of prescription hypnotic medications. Of these almost three quarters were members of the primary care or retirement complex focus groups. Not surprisingly it was those from the primary care and retirement complex focus groups who were the ones who could remember having read or heard reports of the *BMJ Open* paper in the media.

Focus groups were audio recorded and transcribed. Analysis of the transcripts was facilitated using the qualitative data analysis software package NVivo 10. We took an inductive approach to data analysis, which involved reading and re-reading the transcripts, grouping data extracts together based on the main themes and developing a coding frame based on these emergent themes to identify major topics and issues. Codes and themes relating to major issues were discussed between the authors for purposes of reliability and validity. These were used to develop an interpretative analysis of the meaning of the newspaper coverage about the *BMJ Open* article and to address the research questions outlined above.

Subsequently each focus group member was given an identifying code, indicating the type of focus group they had participated in, the number of the group and the gender of the participant, and the sequence in which they first spoke in the focus group (for example, PCFG1F1 indicates Primary Care Focus Group 1, Female 1).

We have chosen a case study approach as it is useful in exemplifying ‘the circumstances and conditions of an everyday or commonplace situation’ (Yin 2009: 48). In our case the commonplace situation is how people reacted to the media story about the negative effects of sleeping tablets. The case study approach also provides a suitable context for addressing our research questions (Bryman 2012). No claim is being made for the representativeness of the posters and focus group members. Rather ‘the validity of the extrapolation depends ...on the cogency of the theoretical reasoning’ (Mitchell 1983: 207) and the extent to which the data support this reasoning.

Finally we should mention two limitations of our study before proceeding. First it should be noted that while we have a baseline understanding of how focus group members thought about

hypnotics before reading the news report, as they had already expressed their views about these pills before being introduced to the coverage in the Daily Mail, this is not the case with the posters. We do not know what they thought of sleeping pills before posting their comments online. Second, it is possible that there were readers of the news report who accepted its de-pharmaceuticalisation framing but decided not to post. Those individuals who did not post their thoughts after reading the article may be the ones most likely to have felt they had 'learned' something or accepted the articles' general stance and content whilst those disagreeing might have been more motivated to put their alternative viewpoint across. It is impossible to know whether this was so as we only have data from posters, but there were a sizeable number of such posters who did embrace this de-pharmaceuticalisation framing. Below we consider posters and focus group members' reaction to this media story in terms of different responses.

Reactions to the media story online and in focus groups

Four main responses were employed by people in posts or focus group discussions when assessing the media coverage of the *BMJ Open* paper. These were: i) To dispute the validity of the information presented – by claiming that it illustrated what we have called 'bad science/journalism'; ii) To emphasise the crucial role that hypnotics played in enabling them to keep going or even survive – in this sense they had no choice but to use hypnotics – Hobson's choice; iii) To assess the risks and benefits of using sleeping tablets, reflecting a range of views around risk avoidance and risk taking; and iv) To elaborate the negative message of the media reporting and/or suggest non-drug alternatives. Participants variously called on repertoires of the 'deserving user' (in distress and in need of help), the 'responsible user' (who used their medication appropriately) and the 'addict' (who was escalating use and losing control over their medication and themselves) in their response to the media story

(Gabe et al 2016). Posters were assigned to only one of these responses on the basis of their posts, as were the great majority of focus group members given their comments.

Beside the four major themes outlined here 37 posts were on other topics. Some focused on sleep and lifestyle with sleep being seen as a virtue. Posters talked about how important sleep was and how lifestyle factors such as stress, diet and exercise can affect sleep either negatively or positively. Other posts were concerned with clarifications or corrections, for example about safety issues or regulation or contained criticisms of other posters for the stance they had taken. No other themes were mentioned in the focus groups.

Below we consider the four main responses in turn.

i) ‘Bad’ Science/Journalism

This represents the biggest category of posts (n=70) and comments by focus group members (n=26). Interestingly posters often sought to develop a sophisticated methodological critique of the study published in the *BMJ Open* as ground for questioning the validity of the findings. Some recognised that a correlation was not the same as causation or that hypnotic drug use was best seen as a proxy for an underlying ‘disease state’. Others saw the coverage as reflecting a failure by journalists to take a critical stance and interrogate the statistics, resulting in scare mongering.

For example, consider a post on *The Guardian* website:

‘Hypnotics represent a valuable aid to individuals during times of distress. Disrupted sleep is one of the commonest symptoms complained of by those with depression.

Those with physical conditions in general hospital often request sleeping aids as well.

This case controlled study makes no attempt to control for mental state, or disease severity, so disrupted sleep, requiring hypnotic prescription, could just indicate disease severity, or a co-morbid mental health problem, both of which could also raise mortality’.

The complex nature of this critique makes one wonder about the background of the posters and the extent to which they had a vested interest in the prescribing of sleeping tablets.

In comparison with the above, focus group members were generally less sophisticated in their comments and focused primarily on the sensationalist nature of reports in the tabloid newspaper running the story and their lack of trust in the story as a result. The focus on sensationalism is not perhaps surprising given the nature of tabloid coverage (Seale 2002), yet even the *Daily Mail* provided readers with enough information about risk to make an assessment of the validity of the claim. In some cases the lack of trust reported was linked to the focus group members’ view that statistics can be manipulated.

‘Well the first thing, just looking at this I don’t believe anything the *Daily Mail* says. And sleeping tablets, “you are five times more likely to die early”. .. Five times more likely than what? I mean statistics, anything like that. I would just question what it means. I wonder how much of it is selective by the *Daily Mail* because a number of times I’ve got things from the *Daily Mail* that are just plain wrong. .. If it had been (the broadsheet papers) *The Times*, *The Guardian*, *The (Daily) Telegraph* even, I think I might make a bit more of it. But I don’t believe anything from *the Daily Mail*.’
(Primary Care FG3, Male 1)

A few wondered if the study had controlled for other conditions or mentioned the distinction between cause and correlation but seemed to lack the degree of statistical knowledge

demonstrated by the posters. Consider, for example, the comment of a participant in an academic focus group:

‘The fact that it is in the *Daily Mail* does frame my reaction....the impression I get is science reporting, even in publications that I read like the Guardian, is not great. I’m not a trained scientist but I’m vaguely aware of issues of correlation and cause and listening regularly to the (BBC) Radio Four programme about statistics, I’m aware of how a small quirk in analysis can actually create the impression. This phrase at the end [from a leading expert in clinical psychopharmacology] about, well you know, if that was the mortality rate people would be ‘dropping like flies’ precisely suggests that phrases like ‘five-fold increase’ and so on are misleading. They might be technically correct but I think there is a sort of general default position which is that every given day a newspaper, especially the *Daily Mail*, will blame something for cancer... So actually I would be quite relaxed I think. I mean I’m not on any medication but I think that I would actually take this as an unnecessarily alarmist treatment of research which seems relatively inconclusive.’ (Academic FG 1, Male 1)

This respondent was clearly sceptical of media reporting in general, and in the *Daily Mail* in particular, and used his limited lay knowledge of statistics, itself informed by a radio series, to justify dismissing the story as unnecessarily alarmist. As he illustrates, such views were not limited to those taking hypnotics but reflect a general scepticism of people about the validity of the claims in the media, including in the tabloids. This response reflects what Collins (2014) has described as ‘ubiquitous meta expertise’, using logic rather than technical knowledge to challenge a media story.

As we also see in the extract above, it was common for those rejecting the content of the article to connect with and repeat the expert in clinical psychopharmacology’s quote that

should the statistics presented be accurate, people would be ‘dropping like flies’. It is interesting how those taking this stance accepted the reporting of a statement by one expert, as it affirms their own stance or beliefs (regarding the publication, the medication or the statistics), while the presentation of research findings of others are questioned or rejected. We can see here then, how readers are both active and selective in their processing of media information.

ii) **Hobson’s Choice**

For posters in this category (n=36) sleeping tablets were not just beneficial, they were crucial in helping them to keep going or in some cases simply enabling them to survive. In developing this viewpoint they drew on experiential knowledge and the repertoire of the ‘deserving user’ (Gabe et al 2016). For them going without these drugs would make them ‘go crazy’. Some combined an emphasis on the drug enabling them to survive with the benefits for public safety and for society. By taking sleeping tablets and acting as ‘responsible’ users they avoided the risk of an accident and were able to hold down a job. In the latter case public health messages about responsabilization (Rose 1999) were being inverted and used to justify taking pills regularly, in contrast to the advice of bodies such as NICE.

Take, for example, the following post in *The Guardian*:

‘As a chronic insomniac for over 25 years I have been on and off sleeping tablets for years, been to sleep clinics, had CBT and tried almost everything on the market. I can go for days without sleep which is unbearable for myself, colleagues and family as it has caused me to have constant depression and anxiety. I do not drive due to the effects of Zolpidem which is a pain but, if my little white pill (half now as I have cut

down) helps me to function on a daily basis, hold down a job and live a relatively normal life and my life is cut short because of it, so be it. Tiredness is more of a killer in my view.'

We see here how non-pharmaceutical treatments are acknowledged, the poster has 'been to sleep clinics' and 'had CBT', and subsequently dismissed as a viable alternative to the pharmaceuticalisation of sleep.

Such meanings were present but found to a much lesser extent in focus group discussions of the newspaper report. The example below comes from one of the retirement home focus groups where the participant draws on the repertoire of the 'deserving user' in arguing that hypnotics had an important role in the management of sleep problems for those who were desperate, as follows:

'You've got to think of the effect that insomnia has on a person's family. I mean if you have got someone walking the street or walking the floor all night, when they don't live on their own, because they can't sleep, I mean it's very disturbing to put it mildly. So there's a place for them'. (Retirement FG 3 Female 2)

Thus posters and focus group members who emphasised the necessity of sleeping tablets in response to the media coverage of the BMJ Open article were in effect resisting the de-pharmaceutical agenda being supported in such coverage.

iii) Risk Assessment

In addition to talk about resisting, rebuffing or questioning de-pharmaceuticalisation there was also discussion of the risks as well as the benefits of sleeping tablets. Posters employing

this risk language (n=66) talked freely about particular hypnotic drugs they had used and gave advice about them. As such they could be characterised as offering a risk/benefit analysis, in line with Webster *et al's* (2009) concept of 'lay pharmacology'. For some the risk was worth taking whereas for others it was too risky. This group thus contained both those who were supportive of pharmaceuticalisation and others who were in favour of de-pharmaceuticalisation or at least restricting pharmaceuticalisation.

Below are examples of an exchange between posters which illustrate both positions, starting off with one who felt the risks were worth taking, drawing on the 'deserving' repertoire. The second poster takes the opposite position, drawing on an 'addiction' repertoire and advocating limited use at best:

'Another scare story you would expect to find in the Mail! I have had trouble sleeping for years. I've tried everything. The only thing that works for me is a mild German tablet called Lendormin. Perfect! I have regular check-ups (blood etc.) and everything is OK. Anybody else had any experience of this particular life saver?'

'Brotizolam (aka Lendormin) is not licensed in the UK – or the USA. It's not particularly mild, some class it as one of the strongest benzodiazepines around – hence the lack of a license here. Even in Germany it should only be used for severe insomnia and short term – only 2-4 weeks. Otherwise you are addicted. Oh dear ...'
(Daily Telegraph)

Focus group members often talked about risks and benefits (n=13) when discussing the media report and, like the posters, generally fell into one of two camps having weighed up the risks, as supportive of or rejecting sleeping pills. Amongst those who saw the benefits as greater than the risks were those on hypnotics from the residential home who considered that at their time of life what was the point of taking them off these pills if their quality of life was

damaged as a result. For example, consider the following exchange amongst focus group members:

RFG1F6: ... doesn't it matter at our age?

RFG1F1: Exactly it's like telling a 99 year old to stop smoking

RFG1F3: Yes, change your diet? Why?!

RFG1F6: I'm not being morbid. I'd rather go early with a good life, feeling good.

RFG1F7: There's not much sense to living to 95 if you feel awful, isn't it?

Moderator: So you actually said you had seen this (news story) before. When you saw it what did you think?

RFG1F7: I'd turned my back on it actually, at my age. Probably if you were younger you might take more notice of it but it didn't impress me...It didn't worry me that I would be popping my clogs earlier... I'd read everything that's available and you just make your own judgement then, don't you.

. As we can see the message of the media story was also discounted on the grounds of 'age' and 'lay expertise'. Other focus group members who were not hypnotic users were more willing to accept the message of the media story, taking a more negative view of the risks in light of the contents of the newspaper article'. For example:

'I think it's very serious. I didn't realise it was as bad as that, you know when you read it. It's worrying, isn't it for people that take a lot of them. ..If I was on any of these, my God I'd be there (GP's surgery) tomorrow (to discuss the risks)!' (RFG2F4)

We can see in the above example how media coverage of medicines could perhaps contribute to a wider ‘de-pharmaceuticalisation’ agenda, by highlighting risks and inciting concern around the use of particular pharmaceutical products. In this case, however, awareness of the risks did not undermine trust in medical authority. Rather, the GP was seen as potentially a key source of advice.

iv) Challenges to pharmaceuticalisation

A fourth and final group of posters (n=47) took a markedly more critical stance. They aimed their criticism at both GPs for handing out hypnotics too easily and at the drug companies who they felt were primarily concerned with profit maximisation. Take, for example, a poster from the *Guardian* who opposed pharmaceutical solutions to health problems, including sleeplessness:

‘Prescription drugs kill a lot of people in the USA every year. This is only the tip of the iceberg. The culture that has doctors reaching for their prescription pads for absolutely every real or imagined ill is long overdue a serious overhaul.’

Other posters aligned themselves with a de-pharmaceuticalisation agenda in recommending alternatives to hypnotics. These included herbal remedies, cognitive behaviour therapy (CBT) and even salt water. For example:

‘Sleep experts say most mental illness is due to lack of, and poor, sleep. To get the sleep you get at the coast when the wind blows in from the sea, just heat salt water in an oil burner overnight. This cures insomnia in just five nights, and takes with it any symptoms of mental illness.’ (The Sun)

Occasionally a poster would express desire for de-pharmaceuticalisation of their own sleep but also the difficulty in achieving this without wider support for and access to non-pharmaceutical treatments such as CBT. The poster below expresses exasperation for being refused CBT by a GP as an alternative to sleeping pills. While being critical of this state of affairs, sleeplessness was still being defined in medical terms as a problem that medicine might help alleviate:

‘I returned to the doctors in January this year (after having previously been prescribed temazepam and Zopiclone) and asked about CBT (Cognitive Behavioural Therapy) as I don’t want to spend my life on sleeping pills... This was refused point blank - my doctor didn’t even seem to be aware it was a valid option for insomniacs, saying it was only for depression.’ (The Guardian)

Focus group members who challenged pharmaceuticalisation (n=7), in contrast, were somewhat less critical and generally restricted themselves to claiming that the media coverage confirmed their view that prescriptions for sleeping tablets were too readily available from GPs and that, if they were still users, such coverage provided them with an increased incentive to stop taking the tablets. Consider the following exchange between a male and female participant from a primary care focus group and the group moderator:

PCFG2M1: I think this is going to... just increase my incentive to get off these drugs by the end of the calendar year basically. Definitely I know, because of the way I feel that taking Zopiclone isn’t good for my body. So I’ve got to go with that.

Moderator: You had already heard the news story, did it stimulate you into checking it out any more at the time?

PCFG2 M1: Well I spoke to a friend who worked, until recently with mental health services.. and had a chat with her about..

Moderator: As a result of this news story?

PCFG2M1: Yes, as a result of the news story and she said ‘I don’t know how many people are prescribed Zopiclone in this country but I bet it is millions’. I didn’t know what the figure was but I do now. I’m shocked actually, that it’s that high. She said a lot of this medication shouldn’t be prescribed in the first place and if it is should be very, very strictly monitored. A lot more should be done so that people don’t end up being addicted.

Later in the discussion he continued:

PCFG2M1: We probably all know that a little bit of something doesn’t tend to have a lasting harm. I’m not doing a little bit of Zopiclone, I’m doing it every day for years.. So I’ve got to do something about it.

PCFG2F1: But print, actually having it in print, black and white, changes your attitude to the way you think, sometimes as well. So I mean, I would be... I could still go on for years and years and not be bloody questioned by my doctor, but because I’ve seen that perhaps I’ll question her now. But then I’m only on a small dose.

In this case the male focus group member had already heard the story and said he had confided with a friend with clinical experience who reinforced the negative message that sleeping tablets were over prescribed and that more should be done to avoid patients getting addicted. The ‘addiction repertoire’ was thus employed rhetorically to support his claim that he intended to come off sleeping tablets as soon as possible. His view was endorsed by a female member of the focus group who said that the media story had changed her mind and

made her think about raising it with her GP, thus continuing to rely on medical authority, although she wanted to make it clear she was not a heavy user (and by implication not addicted). This is the only case in our two data sets where the media coverage of sleeping pills could be said to have challenged people's world view and made them re-think, perhaps because there was a degree of consensus, in light of the media story, that withdrawing from long term hypnotic use was advisable.

Interestingly, none of the focus group participants were critical of the pharmaceutical companies who made the sleeping tablets and only one group talked about cognitive behaviour therapy as an alternative but dismissed this on cost grounds, as reflected in the following exchange:

PCFG2M2: If they were to switch to this CBT... that costs more than pills..

PCFG2M1: Someone is asking that question somewhere I guess.

PFG2M2: If it costs more they won't change, will they?... They will be spending more money when they're supposed to be reducing...there is only so much pie, isn't there?

Here the possibility of de-pharmaceuticalisation through CBT is therefore considered but seen as unrealistic for economic reasons. This is in contrast to the poster above who reported being denied CBT by his GP. In both cases de-pharmaceuticalisation via CBT is seen as problematic.

Discussion

This paper has considered how a story about the long term risks of taking prescribed hypnotics first reported in the *BMJ Open* and then on websites of English national

newspapers and the British Broadcasting Corporation was responded to through online comments (posts), and subsequently by members of focus groups. The paper is thus concerned with what some have called ‘short-term’ rather than ‘long-term effects’ of media coverage (see, for example, Hernandez et al 2012 for such a distinction).

Overall we found that the dominant message of the media coverage of this story - that hypnotics enhance the risk of ‘premature death’ - did not seem to create alarm on the part of the different audiences. In the case of focus group members they generally appear to have responded in line with their existing views of hypnotics. As acknowledged previously, we are not able to make this claim about the posters as we do not know how they viewed sleeping pills before the press coverage of the BMJ Open article.

This is not to say that the people in our study were all passive recipients of media reports. On the contrary, as we have seen, there was strong evidence of resistance to the media story amongst some posters and focus group members. This took the form of criticising the reporting of the story as evidence of ‘bad’ science/journalism, continuing to claim that hypnotics were a necessity despite concerns reported in the media (a view expressed by users as far back as the early 1980s (Gabe and Lipshitz-Phillips 1982)) and drawing on lay knowledge and experience (Williams and Popay 2006) or lay pharmacology (Webster et al 2009) to justify continued use. Repertoires such as the ‘deserving user’ and the ‘responsible user’ were called on to justify continued use while that of the ‘addict’ was drawn on to support withdrawal from use or non-use (Gabe et al 2016). There was indeed only one case where focus group members who were on hypnotics expressed a desire to withdraw or at least discuss that possibility with their doctor in light of the media story, perhaps reflecting a

degree of consensus in the group about the merits of de-pharmaceuticalisation in the face of addiction.

The extent to which lay 'expertise' was drawn on in responding to the media story was one of the most striking findings of this study. People drew on their own or others' experience of taking hypnotics to recognise the legitimacy of taking them or to weigh up the risks and benefits in true late modern style, as reflexive users (Williams and Calnan 1996). Posters in particular expressed scepticism about the scientific quality or methodological limits of the study and the difference between association and causation, apparently drawing on ubiquitous meta-expertise (Collins 2014). They were however a self-selected group which might explain in part at least the availability of such expertise. It is also possible that some of them were not lay experts at all however, but scientists and experts of various kinds in their own right, which would explain the more sophisticated methodological critique of some of the posters, although again we have no concrete evidence to suggest that this was so.

In terms of the wider issue of (de)pharmaceuticalisation, stories such as the one considered here can be seen as contributing to the de-pharmaceuticalisation of sleep agenda that has been emerging in the UK, with measures being put in place to reduce hypnotic prescribing in primary care and some encouragement of CBT from the UK government through the IAPT programme. By framing the story in terms of the risks involved in taking sleeping pills the media may be able to raise public awareness of concern about them. In generating awareness of CBT as an alternative to hypnotics, de-pharmaceuticalisation of sleep is being promoted as a realistic possibility. This could be of particular significance given that a lot of people now get health related information directly from the media, online or through traditional media outlets (Broom and Tovey 2008, Nettleton 2004, Seale 2004), rather than from doctors.

At the same time we have seen that recipients of the media story about sleeping tablets were active and selective in their response to coverage of this issue, as one might expect given the literature on media audiences more generally (Seale 2004, Webster 2014). In this case we found that they often reacted in line with existing views and values, drawing on ubiquitous meta expertise (Collins 2014) or experiential/lay knowledge to corroborate or rebuff information made available to them; thereby in the process supporting pharmaceuticalisation or encouraging its reduction. This finding is similar to other research on people's responses to health stories, such as that concerning online commentators' reaction to media stories challenging US guidelines on breastfeeding (Holton et al 2014, Len-Rios et al 2014). Consequently, it seems that negative stories about medications are not necessarily translated by people into messages to stop taking them or encouragement for de-pharmaceuticalisation. In our study there was only one occasion where this was so, but even then, the subsequent focus group discussion may have been more influential in encouraging the hypnotic user to consider cessation of the pills.

Despite the media in this case presenting CBT as a non-pharmacological alternative to sleeping pills, thus making de-pharmaceuticalisation seem a realistic possibility, we found that when non-drug therapies like CBT were mentioned readers focused on the problems of access or effectiveness rather than seeing them as a realistic alternative to drugs. Moreover, access to therapy was still through doctors, thereby suggesting that it is possible to have the promotion of de-pharmaceuticalisation alongside continuing medicalisation. Further evidence for the continuation of medicalisation in the face of potential de-pharmaceuticalisation is provided by those focus group members who said that negative media coverage of sleeping tablets might lead them to seek advice from their doctor.

In sum, our case study cautions against making strong claims about the power of the media in encouraging or promoting de-pharmaceuticalisation. As Williams et al (2011) note, the mass media may be considered as ‘conveyors’ or ‘amplifiers’ of pharmaceuticalisation, rather than drivers of the process. The media’s negative framing of the hypnotics was generally interpreted in line with readers’ existing values, with the negative messages either being endorsed or challenged in line with their particular world view and non-pharmaceutical alternatives critically assessed rather than being unquestionably accepted as legitimate replacements for hypnotics

This might go some way to explaining why, despite years of negative media coverage around sleeping pills, ambivalence about their use and evidence of widespread reluctance to take them in the general population (Gabe et al 2016), rates of use have remained relatively static. Media reporting on the risks and dangers of hypnotic use may strongly communicate and proliferate an anti-pharmaceuticalisation message. However, unlike media stories of new wonder drugs that promote pharmaceutical expansion and others which might fall under the umbrella of ‘disease mongering’ (Moynihan 2002), in cases of de-pharmaceuticalisation, the message is really only relevant to those whose sleep is already, or has been, pharmaceuticalised. These groups are therefore likely to hold pre-existing views regarding hypnotic use based on experiential knowledge and as our data suggests react to media stories in line with these views. Our analysis suggests that while the media may have a role as legitimators of de-pharmaceuticalisation, this is in the main only for those who are receptive to such a message already.

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References

Abraham, J. 2007. Key socio-political challenges of pharmaceutical development, regulation and public health. Paper given to the International Conference of the Social Science and Health Research Councils of Canada, 14-17 October.

Abraham, J. 2010. Pharmaceuticalization of society in context: theoretical, empirical and health dimensions. *Sociol.* 44, 603-622. Biehl, J.G. 2007. Pharmaceuticalization: AIDS treatment and global health politics. *Anthropol. Quarterly*, 80(4), 1083-1126.

Bell, S., Figert, A. 2012. Medicalization and pharmaceuticalization at the crossroads: looking backwards, sideways and forwards. *Soc. Sci. & Med.* 75, 775-783.

Bloor, M. 1995. A user's guide to contrasting theories of HIV-related risk behaviour. In: Gabe, J. (Ed.). *Medicine, Health and Risk*. Blackwell, Oxford, pp. 19-30.

Bloor, M., Frankland, J., Thomas, M., Robson, K. 2001. *Focus Groups in Social Research*. Sage, London.

Broom, A., Tovey, P. 2008. The role of the internet in cancer patients' engagement with complementary and alternative medicine. *Health* 12 (2), 139-155.

Bryman, A. 2012. *Social Research Methods*, fourth ed. Oxford University Press, Oxford.

- Calem, M., Bisla, J., Begum, A., Dewey, M. et al 2012. Increased prevalence of insomnia and changes in hypnotics use in England over 15 years: Analysis of the 1993, 2000 and 2007 National Psychiatric morbidity surveys. *Sleep* 35 (3), 377-384.
- Cheung, J.M., Bartlett, D.J., Armour, C.L., Ellis, G.E., Saini, B. 2015. People with insomnia: experiences with sedative hypnotics and risk perception. *Hlth. Expectations*. doi: 10.1111/hex.12388
- Collins, H. 2014. *Are We All Scientific Experts Now?* Polity, Cambridge.
- Davis, C. 2015. Drugs, cancer and end-of-life care: A case study of pharmaceuticalization?. *Soc.Sc.Med.* 131, 207-214.
- Davy, Z., Middlemass, J., Siriwardena, A.N. 2013. Patients' and clinicians' experiences and perceptions of the primary care management of insomnia: qualitative study. *Hlth. Expectations* doi: 10.1111/hex.12119
- Gabe, J., Lipshitz-Phillips, S. 1982. Evil necessity? The meaning of benzodiazepine use for women patients from one general practice, *Sociol. Health Illn.* 4 (2), 201-209.
- Gabe, J., Lipshitz-Phillips, S. 1984. Tranquillisers as social control? *Sociol. Rev.* 32(3), 524-546.
- Gabe, J., Thorogood, N. 1986. Prescribed drugs and the management of everyday life: the experiences of black and white working class women. *Soc. Rev.* 34(4), 737-772.
- Gabe, J., Bury, M. 1988. Tranquillisers as a social problem? *Sociol. Rev.* 36(2), 320-352.
- Gabe, J., Bury, M. 1991. Tranquillisers and health care in crisis. *Soc. Sc. & Med.* 32(4), 449-454.

Gabe, J., Bury, M. 1996a. Halcion nights: a sociological account of a medical controversy. Sociol. 30(3), 447-469.

Gabe, J., Bury, M. 1996b. Risking tranquilliser use: cultural and lay dimensions. In: Williams, S., Calnan, M. (Eds.) Modern Medicine: Lay Perspectives and Experience. UCL Press, London, pp. 74-94.

Gabe, J., Coveney, C.M., Williams, S.J. 2016. Prescriptions and proscriptions: moralising sleep medicines. Sociol. Health Illn. 38(2), 627-644.

Gabe, J., Williams, S., Martin, P. Coveney, C. 2015. Pharmaceuticals and society: Power, promises, prospects. Soc. Sc. & Med, 131, 193-198.

Hernandez, J.F., Mantel-Teeuwisse, A.K. van Thiel, M.W. et al 2012. A 10-year analysis of the effects of media coverage of regulatory warnings on antidepressant use in the Netherlands and UK. Plos One 7 (9), 1-10.

Holton, A., Lee, N., Coleman, R. 2014. Commenting on health: A framing analysis of user comments in response to health articles online. J. Health Commun. 19 (7), 825-837.

HSCIC 2015. Prescription Cost Analysis England 2013. Published 8th April 2015.

<http://www.hscic.gov.uk/catalogue/PUB17274/pres-cost-anal-eng-2014-rep.pdf> Accessed 08.08.15.

Kripke, D.F., Langer, R.D., Kline, L.E. 2012. Hypnotics' association with mortality or cancer: A matched cohort study, Brit. Med. J. Open, 2, 1: e000850.

Kroll-Smith, S. 2003. Popular media and 'excessive daytime sleepiness': a study of rhetorical authority in medical sociology. Sociol. Health Illn. 25 (6), 625-643.

- Len-Ríos, M. E., Bhandari, M., Medvedeva, Y. S. 2014. Deliberation of the scientific evidence for breastfeeding online comments as social representations. *Sci. Communication*, 36 (6), 778-801.
- Lumme-Sandt, K., Hervonen, A., Jylha, M. 2000. Interpretative repertoires of medication among the oldest-old. *Soc. Sci. Med.* 50, 1843-1850.
- Mental Health Foundation. 2011. Sleep Matters: The Impact of Sleep on Health and Wellbeing. <http://www.mentalhealth.org.uk/publications/sleep-report/> Accessed 12/06/15.
- Mitchell, J.C. 1983. Case and situation analysis. *Soc. Rev.* 31, 186-211.
- Montagne, M. 1991. The culture of long term tranquilliser users. In: Gabe, J. (Ed.). *Understanding Tranquilliser Use*. Routledge, London, pp. 48-68.
- Morin, C.M., Bootzin, R.R., Buysse, D.J., Edinger, J.D., Espie, C.A., Lichstein, K.L. 2006. Psychological and behavioural treatment of insomnia: Update of the recent evidence (1998-2004). *Sleep*, 29, 1398-1414.
- Morin, C.M., Hauri, P.J., Espie, C.A., Spielman, A.J., Buysse, D.J., Bootzin, R.R. 1999. Non-pharmacologic treatment of chronic insomnia. *Sleep* 22, 1134-1156.
- Morgan, D. 1997. *Focus Groups as Qualitative Research*. Sage, Newbury Park, CA.
- Morgan, K., Clarke, D. 1997. Longitudinal trends in late-life insomnia: implications for prescribing. *Age and Ageing*, 26, 3, 179-184.
- Moynihan, R. 2002. Disease-mongering: how doctors, drug companies and insurers are making you feel sick. *British Med. J.* 324, 923.

Murdoch, J., Salter, C., Cross, J., Smith, J., Poland, F. 2013. Resisting medications: moral discourses and performances in illness narratives. *Sociol. Health Illn.* 33 (3), 449-464.

Nettleton, S. 2004. The emergence of e-scaped medicine. *Sociol.* 38, 4, 661-679.

NICE 2004. Guidance on the use of zalepon, zolpidem and zopiclone for the short term management of insomnia, Technology appraisal 77. Issued April 2004.

<http://www.nice.org.uk/nicemedia/pdf/TA077fullguidance.pdf>

NICE 2010. Consideration of consultation responses on review proposal Review of TA77: zaleplon, Zolpidem and Zopiclone for the management of insomnia, Decision paper considered by the Guidance Executive, August 2010.

<http://www.nice.org.uk/nicemedia/live/11530/50368/50368.pdf>

Potter, J., Wetherell, D. 1987. *Discourse and Social Psychology – Beyond Attitudes and Behaviour*. Sage, London.

Pounds, P., Britten, N., Morgan, M., Yardley, L., Pope, C., Daker-White, G., Campbell, R. 2005. Resisting medicines: A synthesis of qualitative studies of medicine taking, *Soc. Sci. & Med.* 61(1), 133-155.

Rose, N. 1999. *Governing the Soul: The Shaping of the Private Self*. Second Edition, Free Association Books, London.

Seale, C. 2002. *Media and Health*, Sage, London.

Seale, C. 2004. Health and Media: an Overview. In: Seale, C. (Ed.) *Health and the Media*. Blackwell Publishing, Oxford.

Seale, C., Boden, S., Williams, S.J., Lowe, P., Steinberg, D.L. 2007. Media construction of sleep and sleep disorders: a study of UK national newspapers. *Soc. Sci. Med.* 65, 418-430.

Understanding Society. 2011. Early Findings from the First Wave of the UK's Household Longitudinal Study. Economic and Social Research Council, Swindon.

<http://www.understandingsociety.ac.uk/research/publications/findings/early>. Accessed 12/06/15

Webster, A., Douglas, C., Lewis, G. 2009. Making sense of medicines: 'lay pharmacology' and narratives of safety and efficacy. *Science as Culture*, 18(2), 233-47.

Webster, F. 2014. *Theories of the Information Society*. Routledge, London.

Williams, G., Popay, J. 2006. Lay knowledge and the privilege of experience. In: Kelleher, D., Gabe, J., Williams, G. (Eds.). *Challenging Medicine*. Routledge, London, pp. 122-145.

Williams, S.J. 2005. *Sleep and Society: Sociological Explorations and Agendas*. Routledge, London.

Williams, S.J., Calnan, M.W. 1996. The limits of medicalization? Modern medicine and the lay populace in 'late' modernity. *Soc. Sci. Med.* 42, 12, 1609-1620.

Williams, S.J., Martin, P., Gabe, J. 2011. The pharmaceuticalisation of society? A framework for analysis. *Sociol. Health and Illn.* 33(5), 710-725.

Williams, S.J., Seale, C., Boden, S., Lowe, P., Steinberg, D. 2008. Waking up to sleepiness: modafinil, the media and the pharmaceuticalisation of everyday/night life. *Sociol. Health. Illn.* 30(6), 839-855.

Yin, R.K. 2009. *Case Study Research: Design and Methods*. 4th edition. Sage, Los Angeles.